

**SCAEVOLA TACCADA (GAERTN.) ROXB. (GOODENIACEAE)—AN
INTERESTING RECORD FROM VISHAKHAPATNAM AREA,
ANDHRA PRADESH**

Scaevola taccada, an important element of the coastal flora, has not been recorded as occurring in the eastern coast, north of Tuticorin, according to recent literature on the specific distribution of coastal plants (Rao R. S. 1959, Rao T. A. 1971, T. A. Rao & A. R. K. Sastry 1971, 74, Sastry & Rao 1973, Thothathri *et al.* 1973 & Venkateshvaralu 1972).

Scaevola taccada (Gaertn.) Roxb. has now been collected thrice, in flower and in fruit during March and July 1978 and October 1979. The study of these fresh collections and reference to literature on the range of distribution, together with earlier collection in the Herbarium of the Botanical Survey of India, Southern Circle, Coimbatore (MH)

and at Central National Herbarium, Botanical Survey of India, Howrah (CAL), has enabled compilation of the following notes, establishing its distribution north of Tuticorin.

Scaevola taccada (Gaertn.) Roxb. (Goodeniaceae) is known from Tenasserim to Polynesia and Australia through Andamans and Malesia. In India, the distribution of *Scaevola* with the two species *S. taccada* and *S. plumieri* (L.) Vahl is well known along the West Coast, from Kutch and South Gujarat to Kerala through Konkan and Karnataka extending up to Tuticorin, in the Southern part of the East Coast.

The two species form a predominant element, with the strand flora, in the numer-



Plate I. : Typical habitat of rocky, gulley projection into the sea at Rambilli near Arakapalli sea-coast, Andhra Pradesh, showing dense growth of *Scaevola taccada*,
Inset : Abnormal 6-merous flower (variation No. 3)

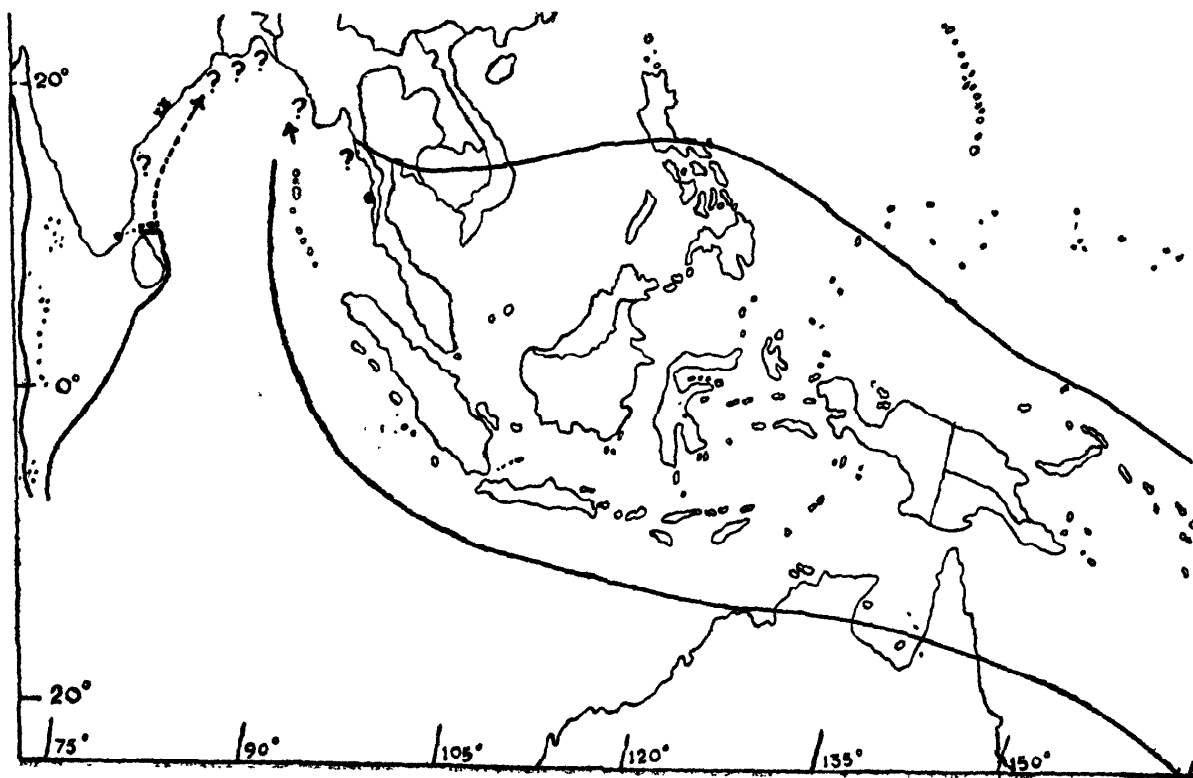
ous rocky projections and crevices, offering an ideal habitat.

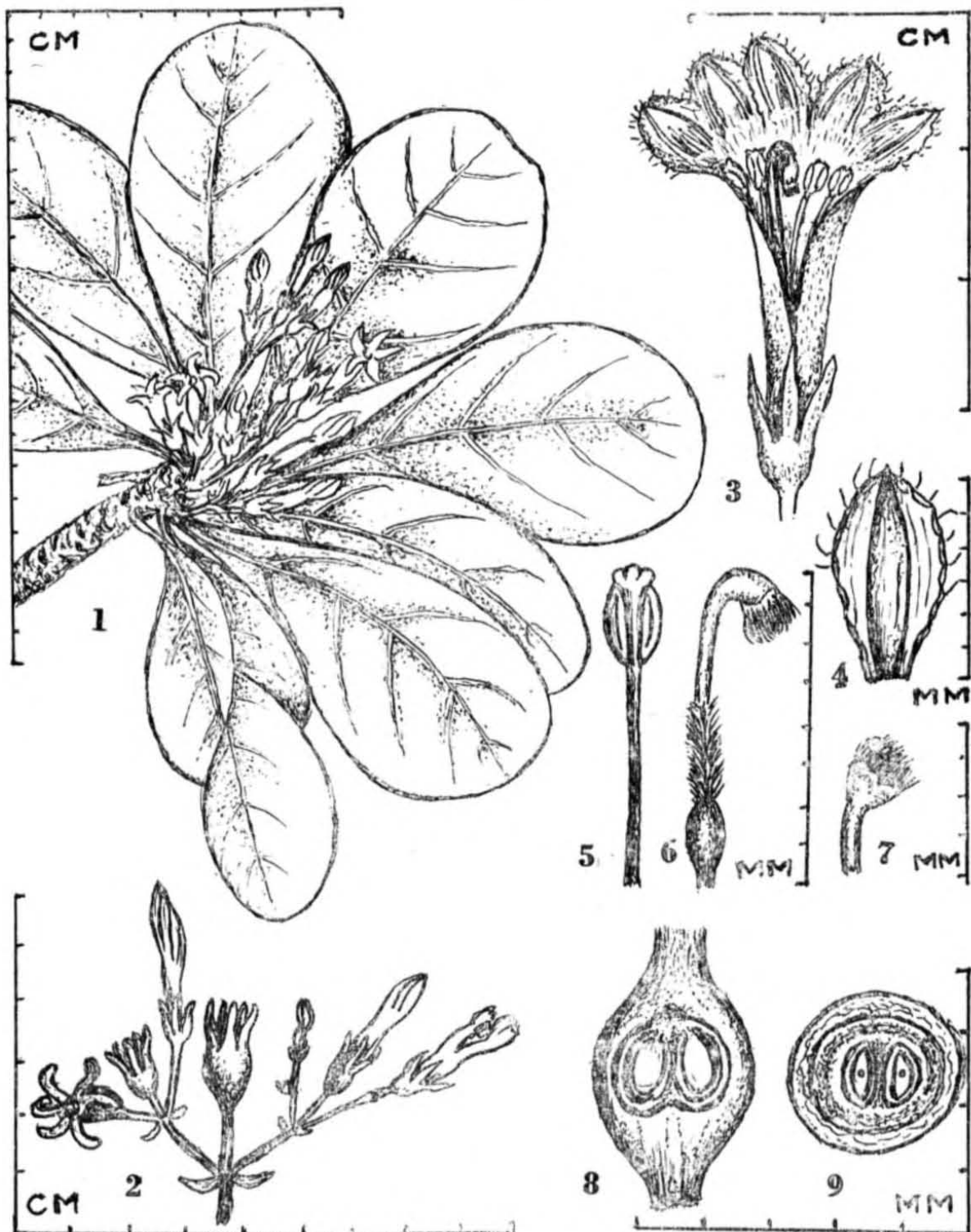
S. taccada, a coral sand indicator, grows rather stunted along oceanic islands like Lakshadweep, Maldives and other adjoining coral islands. *S. taccada* has so far not been reported further north of Tuticorin along the East Coast of India (through Tamilnadu, Andhra Pradesh, Orissa, West Bengal), Bangladesh and most of the Burma coast up to Tenasserim (Map). Though both the species of *Scaevola* grow along the southern most coastal area of India and Northern Ceylon, *S. plumieri* does not seem to spread towards the eastern side and rather appears to be moving towards the west along the Atlantic, while *S. taccada* grows along the eastern coastal region, spreading over the Indo-Pacific coastal belt.

The present collections of *S. taccada* from the Yarada hill bottom, facing the sea and Rambilli coast along Vishakhapatnam-

Anakapalli sea coast, Andhra Pradesh, clearly establishes the continuity of distribution of the species further north of Tuticorin along the east coast (Plate I). Further explorations along the east coast of India, in the rocky habitats may reveal its presence up to West Bengal and the Chittagong coast of Bangladesh, including the adjoining coast of Burma (Map). With its known occurrence in Ceylon (Sri Lanka) and at Tuticorin, it is a surprise as to why it had not been collected further north, in the east coast. In the area between Tuticorin and Vishakhapatnam too, a careful look should very likely find *S. taccada* in its favoured habitat.

Scaevola taccada (Gaertn.) Roxb. Hort. Beng. 15. 1814. *Lobelia taccada* Gaertn. Fruct. 1: 119. t. 25. 1788. *Scaevola sericea* Vahl, Symb. Bot. 2: 37. 1791; Leenhouts, Fl. Males. Ser. 1, 5: 339. 1957; *S. koenigii* Vahl, Symb. Bot. 3: 36. 1794; Miq., Fl.





Scaevola taccada (Gaertn.) Roxb.

Figs. 1-9 : 1. Habit, 2. Inflorescence, 3. Flower, 4. Petal, 5. Stamen, 6. Pistil, 7. Opened stigma, 8, L. S. of ovary, 9. T. S. of ovary.

Ind. Bot. 2: 580. 1857; Clarke in Hook. f. Fl. Brit. Ind. 3: 421. 1881; Cooke, Fl. Bomb. 2: 128. 1904 (reprint ed. 1958). *S. frutescens* auct. (non *Lobelia frutescens* Mill. 1768) non Krause in Engl. & Prantl, Natur. Pflanzenfam. 54: 125. t. 25. 1912; Gamble, Fl. Madras 2: 516. 1921 (Reprint ed. 1956). (Figs. 1-9)

Shrubs 1-3 m high. Stems 10-15 cm thick with prominent leaf scars. Leaves fleshy, crowded at the ends of branches; lower leaves larger, often up to 20 × 10 cm; upper ones 13 × 6 cm. Inflorescences of short axillary dichotomous cymes. Flowers white, 2.5-3.5 cm long. Sepals 5 (6, 7), 8-11 mm long, often enlarged in fruit. Petals 5 (6, 7); 15-22 × 4-5 mm; tube hairy inside. Stamens 5, rarely 6, 12-15 mm long. Ovary bicarpellary, syncarpous bilocular with one pendulous ovule in each locule. Style 18-20 mm long, the lower half hairy. Stigma flat, bilobed covered by an indusium-like cup, fringed by dense short hairs. Fruit a drupe, subglobose, 15 × 18 mm, succulent, white when ripe, crowned by the accrescent calyx.

Lobelia frutescens Mill., in Gard. Dict., ed. 8, 1768, is not *Scaevola* (Harold St. John in *Taxon* 9: 200-208. 1960). The earliest specific epithet available is *Lobelia taccada* Gaertn. (1788). Harold St. John's opinion is accepted by me, and the combination as indicated above is considered the correct name.

Flowers are generally pentamerous but in some, abnormal features in floral parts as noted below have been observed. (1) Flowers with 6 sepals, 5 petals and 5 stamens; (2) with 7 sepals, 6 petals and 5 stamens; (3) with 6 sepals, 6 petals and 6 stamens (Plate I inset). Of the 45 flowers examined, variations (1) & (2) are fairly common with 20-35% and variation (3) is rather rare. Interestingly many fruits are seen with 6 accrescent calyx lobes which are considered to be formed from flowers of (1) and (2) variation types.

Specimens examined: INDIA: GUJARAT: Dwaraka, T. A. Rao 516, 5-7-1979 (CAL). MAHARASHTRA: South Concan, Dalzell s. n., 1878 (CAL). KARNATAKA: Surathkal beach, T. A. Rao 10063, Nov. 1972 (CAL). KERALA: Cochin, A. Meebold 12744, Nov. 1894; Varkala, T. A. Rao 7963, 16.6.72. Tellichery shore, T. A. Rao 9924, Nov. 1972 (CAL); Cannanore, Gamble 28961 (MH). LAKSHADWEEP ISLANDS: Keltan, Stocks s. n.; Minicoy, Wadhwa 69814; Kalpeni, Srinivasan s. n.; Kavaratti, Srinivasan s. n.; Androth, Wadhwa 68632; Amini Island, Wadhwa s. n.; Betra par, "HMIM Investigator" collection (CAL). TAMIL NADU: Krusadi Island, Ramnad dt., Daniel & Raju 88221, 25.9.1944; Parthasarathy & Daniel 88149, 26.9.1946; Gopala Rao 93042 (MH); A. K. Mukherjee 214; T. A. Rao 1494 (CAL). ANDHRA PRADESH: Rocky coast of Rambilli, 30 km south of Vishakhapatnam, Sudhakar 284, 4.3.78; Sudhakar 293, 13.7.79; Dolphin nose, down Yarada hill, Vishakhapatnam, Sudhakar 300, 5.10.1979 (all in Botany Dept. Herbarium, Andhra University). (CAL). ANDAMAN ISLANDS: North Bay hill jungles, King 28962, on 9.8.1891; Little Andamans, Thothathri 18183, on 10.3.59 (all in HM); Lebancore, Ellis & K. R. Murthy 36773, 36774, on 18.4.1964; Port Blair, Balakrishnan 1; South Andamans, Thothathri 9269 (CAL). NICOBAR ISLANDS: Hut Bay, Bhargava 3316; Narcondam Island, Prain s. n.; Barren Island, Prain s. n., Nancowry Island, King's Coll.; Kiltan Island, Stocks s. n. (CAL). MALDIVES: J. S. Gardner s. n. (CAL).

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A NEW SPECIES OF *CEROPEGIA* LINN. (ASCLEPIADACEAE) FROM THE WESTERN GHATS IN MAHARASHTRA STATE (INDIA)

Ceropegia jainii* Ansari et Kulkarni *sp. nov.

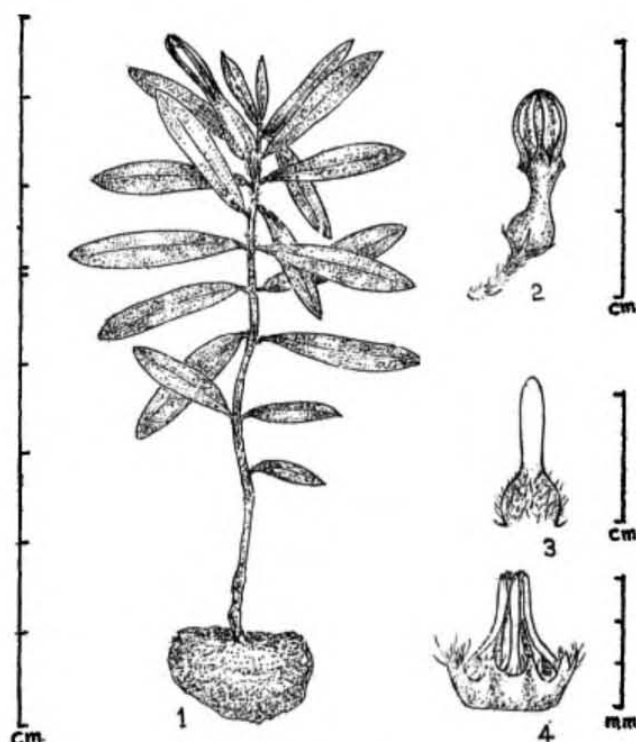
Ceropegia pusillae Wt. et Arn. affinis in habitu pumilo et cymis unifloris, sed differt foliis ellipticis, floribus usque ad 2 cm longis, corollae lobis ovatis et intus basi pilosis, et tubo aequantibus.

Holotypus (*Kulkarni* 121885A) et isotypi (*Kulkarni* 121885 B-F) lecti ad Ambolighat in dist. Ratnagiri ditone Maharashtra die 13th Augusti anni 1971; holotypus positus in CAL; isotypi *Kulkarni* 121885 B-C in BSI; D in CAL; E in K; F in BLAT.

Ceropegia jainii* Ans. et Kulk. *sp. nov.

Similar to *Ceropegia pusilla* Wt. et Arn. in its dwarf habit and unflowered cymes, but differs in its leaves being elliptic, flowers upto 2 cm long only, corolla lobes ovate and pilose inside at the base only, and equal to the tube.

The holotype (*Kulkarni* 121885A) and the isotypes (*Kulkarni* 121885 B-F) were collected at Ambolighat, Ratnagiri dist., Maharashtra State on 13-8-1977. The holotype is deposited in CAL; isotypes *Kulkarni* 121885 B-C in BSI; D in CAL; E in K; F in BLAT.



Ceropegia jainii Ans. et Kulk. *sp. nov.*

Figs. 1-4: 1. A whole plant. 2. A flower. 3. Ventral view of a fully opened corolla lobe showing hairs at the base. 4. A corona.

An erect herb, 6-10 cm in height with subglobose or depressed tubers. Stem unbranched, rarely 2, from the same tuber,